



Munters helps dry Danish employees' clothes

Nexus drying room, Denmark



Details from the DGNB gold certified NEXUS office building, constructed according to Low Energy Class 2020.



The Danish Energy Agency, Road Directorate, Building Authority, Transport, Construction and Housing Agencies have all moved into completely new facilities - NEXUS. The new 41,000m² office building in Copenhagen, consists of four towers with up to eight floors and is connected with walkways between the towers.

The office building is the largest PPP project in Denmark to date. Arkitema Architects and MOE have been brought on as advisors. A PPP consortium consisting of A. Enggaard, Velliv and Pension & Life Insurance has built and owns the building.

The building is constructed in accordance with the low energy class 2020 and is DGNB gold certified. To help meet the constructors goal for an energy-efficient office building, Munters was appointed as the supplier of a sustainable drying solution for employees' biking and training clothes. The solution is both very practical and extremely energy efficient, and the answer to today's need for quick and efficient clothes drying.

Case study

- Munters turn-key drying room concept

Advantages:

Delivery includes:

- Munters dehumidifier with controls and circulation fans with controls
- Stainless steel rack system (optional) and installation
- Electrical work (wiring of all components in the drying room)
- Start up and commissioning of the complete system



Complete drying room with just one supplier

The Munters' drying room concept is based on desiccant dehumidification, which is a dehumidification principle invented by Swedish founder Carl Munters, more than 60 years ago. Dehumidification offers the key advantage that clothes will be completely dried without any use of heat and, thus is a sustainable solution that supports companies' desire for a green profile.

The drying room concept is a complete Turn-Key concept, where Munters, in addition to dehumidifiers, fans and control also supply a tailor-made rack system made of stainless -steel.

Working with only one supplier, Munters, the contractor/end user avoids coordinating several different suppliers.

Munters has the necessary knowledge to make the whole delivery and installation process easy for the customer.

Happy employees heading home in dry clothes

In the NEXUS office building, near Dybboelsbro Station in Copenhagen, 2,200 government employees work. An almost 20,000 m² underground parking lot can hold 350 cars and 1,640 bicycles.

The basement is also furnished with a gym and changing facilities, and a Munters drying room. Employees that bike to work are offered efficient drying of their wet fitness and bicycle clothes, towels, and footwear.

The drying room is equipped with two Munters dehumidifiers and eight circulation fans. On the walls of the 32 m² room, the easy-to-use and clean stainless steel rack system is mounted, holding both clothing, shoes, and towels.

The drying room is equipped with a PIR (motion sensor) control, which automatically activates the fans. When the humidity in the room rises, due to wet clothes, the dehumidifiers are automatically activated via the moisture sensor and clothes are efficiently and gently dried. By the end of working day, the employees are then able to jump back into their now completely dry clothes for their run or bike ride back home.



On-demand operation minimizes energy consumption

Depending on the size of the drying room, one or more desiccant dehumidifiers are used, which are controlled by a humidistat (moisture sensor with control) which activates and controls the system and is fully automatic.

This kind of demand-controlled operation ensures that the system is only in operation when needed, limiting energy consumption to just what's needed to dry the clothes.

That's what we call energy efficient

A quick calculation: From that one-kilowatt hour that a Munters drying room concept typically consumes to remove one liter of water from the air, 50% of the energy is brought into the room as warm and dry air, and thus helps heat the room.

The remaining 50% leaves the room with the warm, wet air. Adding this airstream to the building's heat recovery system during cold months, actual consumption is limited to 0.25 kWh. It's the cheapest drying method available!



Fully approved concept with more than 350 Danish installations

The concept itself originates from the Armed Forces, where Swedish-based Munters Group has been for decades the main provider of drying equipment for combat uniforms, diving suits and equipment.

Using desiccant dehumidification to dry clothes has proved to be the most energy-efficient method, compared to other drying methods, including refrigerant dehumidification. This has been confirmed in COWI's report prepared for the Danish Defense Building Services' "The optimal drying room" 52813.10/Oct.2002.

The Munters method is also extremely gentle, since clothes are not exposed to high temperatures typical in electrically-heated drying cabinets. Clothes therefore last longer, and since clothes are thoroughly dried and not just warmed (as in a drying cabinet), associated odors are avoided.

The Munters concept has successfully found its way to a large and rapidly growing number of day-care centers, pre-schools, police and fire stations, housing associations and dorms, where quick laundry turnover is important.

Read more about Munters drying concept on our website
www.munters.com/drying-rooms

Would you like to find out if Munters has a solution for your company too? If so, please visit our website, www.munters.com

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